

REMARKS

Applicants respectfully traverse and request reconsideration.

Applicants respectfully note that Claim 24 has been amended to correct typographical errors. Specifically, verb tenses have been corrected in elements (b)-(d) placing the terms in proper form. Applicants respectfully note that no new matter has been added to the claim and that Claim 24 is in proper condition for allowance.

§ 102(e) Rejections

Claims 1-3, 5-6, 9, 12-14 and 17 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Blinn, U.S. Patent 6,184,891. Applicants submit that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly, or inherently described, in a single reference. Furthermore, the identical invention must be shown in as complete detail as contained in the claim.

Applicants submit that Blinn fails to disclose each and every element of Applicants' claimed subject matter and respectfully request the Examiner to withdraw the rejections.

Blinn is directed to a fog simulation for partially transparent objects. Further, in the Summary Of The Invention section, it is further explained that Blinn discloses a fog method that is applied after computing the color of the pixel being fogged. The fogged pixel is then composited with another pixel at the same location. This method can be used in a layered graphics rendering pipeline where geometry in a graphics scene is rendered to separate image layers called sprites. A fogged image layer can be stored and re-used as long as the object rendered to the image layer moves in an (x,y) plane. If an object moves in the z direction, then it can be re-rendered independently and fogged using a new amount of fog representing the fog between the viewpoint and the object.

Here, the fog effect upon an object is dependent on the z depth that the object is located. It does not matter whether or not the object is located in front of or behind another object. The blending is performed such that whatever portion of that object is in the line of display, such portion is displayed and contains the correct fogging effect having been previously determined. This is why a fogged image can be stored and reused as long it remains in the same x-y plane, (i.e., the amount of fog between the point of sight and the object have not changed.). Therefore, fog is applied to each sprite layer independently. There is no need to apply the fog based on the location of other sprite layers as the only important factors are the depth of the current sprite being fogged, and the amount of fog between the point of sight and that sprite.

Therefore, since the existence of other sprite layers is irrelevant to the fogging of any particular sprite layer, there is no need for a fogging module to have any information regarding any of the other sprite layers than the one it is currently performing on. Further, it does not matter which layer is fogged first as again, only the fog amounts and z distance of the sprite layer is needed for performing such fogging.

Independent Claim 1

Applicants note that claim 1 is for “a plurality of video graphics pipelines, wherein each of the plurality of video graphics pipelines is operable to process a corresponding image layer and wherein one of the plurality of video graphics pipelines processes a foremost image layer ...” (claim 1). Applicants submit that the Office Action’s cited references to Blinn are absent any disclosure of multiple graphic pipelines. Each of Blinn’s references to a pipeline appear to be made in the singular, such as: “[i]n a layered graphics pipeline,” (Col. 17, ln. 53), and “the fog model applies to a layered graphics pipeline,” (Col. 18, Lines 17-18). Further, under the section labeled “Implementation of the Layered Graphics Rendering Pipeline,” Blinn states that a single pipeline, (i.e., not pipelines), “can independently render objects or parts of object in a scene to

separate image layers called sprites,” (Col. 13, Lines 60-62). Blinn continues: “the ... implementation includes a DSP 334, tiler buffer 336, shared memory 338, gsprite engine 340, compositing buffer 342, and digital-to-analog converter (DAC) 334, (Col. 14, Lines 8-10), “the ... system renders independent scene elements to sprites, combines the sprites into display images, and transfers the display images to a display device through the DAC 334,” (Col. 14, Lines 13-18; Fig. 8). As such, Blinn discusses how a single pipeline is used to render multiple sprite layers, and nowhere discusses, teaches or suggests Applicants claimed subject matter of “a plurality of video graphics pipelines, wherein each of the plurality of video graphics pipelines is operable to process a corresponding image layer and wherein one of the plurality of video graphics pipelines processes a foremost image layer ...” (claim 1).

Further, Applicants also submit that in addition to Blinn not disclosing, teaching or suggesting the use of multiple video graphics pipelines, Applicants submit that Blinn also does not disclose, teach or suggest “a *blending module operably coupled* to the plurality of video graphics pipelines, wherein the blending module blends, in accordance with a blending convention, the corresponding image layers ...,” (claim 1). In support, Applicants submit that the blending shown in Fig. 8 is shown to occur within a single pipeline, the pipeline containing the DSP, Tiler, gsprite engine, compositing buffer (containing the alpha buffer), and the DAC. As such, Applicants further submit that Blinn teaches away from Applicants subject matter by disclosing that its alpha blending is performed on the multiple sprite layers within a single pipeline.

Regarding the Office Action’s statement that “Blinn illustrates in Figs. 2, 4-6 the plurality of video graphics pipelines [that] processes a foremost image layer and a blending module operably coupled to the plurality of video graphics pipelines,” Applicants submit that Fig. 2 is a demonstration of the problems with conventional fog simulations, (Col. 4, Lines 51-53), while

Fig. 3 is a graphical illustration of the logic for solving the problem associated with fogging partially transparent surfaces that overlap other fogged surfaces, (Col. 6, Lines 31-35). Furthermore, Fig. 6 shows a scene with several overlapping objects and fog to illustrate how to compute fog for object layers, (Col. 4, Lines 64-67). However, none of the three figures disclose a plurality of video graphics pipelines. Further, and as discussed above, Applicants are not only unable to identify anywhere within Blinn any disclosure of the use of multiple pipelines, Applicants are also unable to identify anywhere within Blinn any suggestion of locating a blending mechanism outside of such a single graphics pipeline. As such, Applicants submit that Blinn's explicit discussion of locating the alpha blending mechanism within a single pipeline, teaches away from placing such a blending mechanism elsewhere.

Dependent Claim 2

In addition, Applicants also submit that because claim 2 (dependent claim) depends from claim 1 (parent claim), and as a dependent claim therefrom, the dependent claim is allowable for at least the reasons for which the parent claim is allowable. Applicants further submit that the dependent claim is also allowable in light of the presence of novel and non-obvious elements contained therein that are not otherwise present in the parent claim.

Dependent Claim 3

In addition, Applicants also submit that because claim 3 (dependent claim) depends from claim 2 (parent claim), and as a dependent claim therefrom, the dependent claim is allowable for at least the reasons for which the parent claim is allowable. Applicants further submit that the dependent claim is also allowable in light of the presence of novel and non-obvious elements contained therein that are not otherwise present in the parent claim. Moreover, the Office Action's citation of Blinn does not make reference to a per pixel alpha value global alpha value as required by Applicants' claimed invention.

Dependent Claim 4

In addition, Applicants also submit that because claim 4 (dependent claim) depends from claim 2 (parent claim), and as a dependent claim therefrom, the dependent claim is allowable for at least the reasons for which the parent claim is allowable. Applicants further submit that the dependent claim is also allowable in light of the presence of novel and non-obvious elements contained therein that are not otherwise present in the parent claim.

Dependent Claim 5

In addition, Applicants also submit that because claim 5 (dependent claim) depends from claim 1 (parent claim), and as a dependent claim therefrom, the dependent claim is allowable for at least the reasons for which the parent claim is allowable. Applicants further submit that the dependent claim is also allowable in light of the presence of novel and non-obvious elements contained therein that are not otherwise present in the parent claim.

Dependent Claim 6

The Office Action equates Blinn's alpha buffer and color buffer with Applicants first and second mixing modules respectively. Applicants' claim 6 claim language states, inter alia, "the first mixing module blends at least two of the corresponding image layers to produce an intermediate blended image, and wherein the second mixing module blends the foremost image layer with the intermediate blended image." Applicant submits that its first and second mixing modules are not disclosed, taught or suggested by Blinn. Rather, Applicants submit that what Blinn does disclose are two buffers that are used together to process all the sprite layers to render each pixel for each object in the image. The alpha buffer stores alpha values and the color buffer stores color values for compositing and display. In support, Applicants submit language from Blinn which states: "compositing buffer (342) includes two ... color buffers which are toggled between display and compositing activities. The compositing buffer also includes a[n] ... alpha

buffer which is used to accumulate alpha for each pixel. This particular compositing buffer has compositing logic ... [which] receives transformed sprite samples, and combines them with the accumulated color values using the alpha values from the alpha buffers,” (Col. 16, Lines 56-65). To the extent that Blinn does not disclose, teach or suggest Applicants’ subject matter, Applicants submit that its claim 6 subject matter is allowable as written.

In addition, Applicants also submit that because claim 6 (dependent claim) depends from claim 1 (parent claim), and as a dependent claim therefrom, the dependent claim is allowable for at least the reasons for which the parent claim is allowable. Applicants further submit that the dependent claim is also allowable in light of the presence of novel and non-obvious elements contained therein that are not otherwise present in the parent claim.

Dependent Claim 9

Applicants acknowledge the Office Action’s statement that Blinn does not disclose Applicants’ claimed YUV color space. As such, Applicants submit that therefore Blinn does not anticipate Applicants’ claim 9 subject matter having at least two possible color bases, one of which being a YUV color space. Further, since Snyder is a different reference from Blinn, and Blinn is the reference being asserted as anticipating Applicants’ claimed subject matter, the allegation that Snyder discloses a limitation not otherwise found in Blinn is not pertinent to whether Blinn anticipates Applicants’ subject matter, as such, Applicants submit that the claim is allowable as written.

In addition, Applicants also submit that because claim 9 (dependent claim) depends from claim 1 (parent claim), and as a dependent claim therefrom, the dependent claim is allowable for at least the reasons for which the parent claim is allowable. Applicants further submit that the dependent claim is also allowable in light of the presence of novel and non-obvious elements contained therein that are not otherwise present in the parent claim.

Dependent Claim 12

First, Applicants direct the Examiner's attention to the arguments made above regarding claim 1. More specifically, to the arguments that the Office Action's cited references to Blinn are absent any disclosure of multiple graphic pipelines and are absent any disclosure of a blending module operably coupled to the plurality of video graphics pipelines.

In addition to the above, Applicants also submit that nowhere does Blinn disclose, teach or suggest "... a hardware cursor pipeline operable to process a cursor image ...," (claim 12). Rather, and as shown in Fig. 8, Blinn discloses a *single* pipeline that processes each sprite layer, regardless of its content. (Emphasis added). Further, nowhere does Blinn disclose that a sprite layer contains any type cursor image at all, including a hardware cursor. In fact, Applicants submit that Blinn teaches away from the rendering of a cursor image in its pipeline as Blinn states that the "rendering system can render objects or parts of objects in a scene to separate image layers called sprites," (Col. 13, Lines 60-62), where Applicants submit that a cursor is generally not considered as part of a scene, but rather as a user graphics interface tool. Further, Applicants submit that a hardware cursor is *generally* blended with video graphics data, but generally not via an alpha blending technique. (Emphasis added).

Dependent Claim 13

Applicants submit that because claim 13 (dependent claim) depends from claim 12 (parent claim), and as a dependent claim therefrom, the dependent claim is allowable for at least the reasons for which the parent claim is allowable. Applicants further submit that the dependent claim is also allowable in light of the presence of novel and non-obvious elements contained therein that are not otherwise present in the parent claim.

Dependent Claim 14

Applicants submit that because claim 14 (dependent claim) depends from claim 13 (parent claim), and as a dependent claim therefrom, the dependent claim is allowable for at least the reasons for which the parent claim is allowable. Applicants further submit that the dependent claim is also allowable in light of the presence of novel and non-obvious elements contained therein that are not otherwise present in the parent claim.

Dependent Claim 17

Applicants direct the Examiner to the arguments made regarding claim 6 and submit that claim 17 is allowable as written for the same, or similar reasons. In addition, Applicants also submit that because claim 17 (dependent claim) depends from claim 16 (parent claim), and as a dependent claim therefrom, the dependent claim is allowable for at least the reasons for which the parent claim is allowable. Applicants further submit that the dependent claim is also allowable in light of the presence of novel and non-obvious elements contained therein that are not otherwise present in the parent claim.

§ 103(a) Rejections

Claims 4, 10-11, 15, 16, 20-27 and 28-32 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Blinn, an in further view of Snyder et al. (US Pat. No. 6,326,964). Applicants respectfully request reconsideration and withdrawal of these rejections based on the following discussion.

Snyder et al.

Snyder et al. is directed to a system for sorting 3D object geometry among image chunks for rendering in a layered graphics rendering system. As disclosed in the Summary Of The Invention, the invention uses pre-processing to prepare 3D graphics data.

Dependent Claim 4

Applicants acknowledge the Office Action's statement that Blinn does not disclose the AND/XOR blending.

Applicants also submit that because claim 4 (dependent claim) depends from claim 2 (parent claim), and as a dependent claim therefrom, the dependent claim is allowable for at least the reasons for which the parent claim is allowable. Applicants further submit that the dependent claim is also allowable in light of the presence of novel and non-obvious elements contained therein that are not otherwise present in the parent claim.

Dependent Claim 10

Applicants direct the Examiner's attention to the arguments made above regarding claim 1, specifically the argument directed to the fact that Blinn is absent any disclosure of multiple graphic pipelines. Further, Applicants submit that Blinn is directed to processing RGB information, not YUV information. Applicants further submit that because 2D and 3D images can be stored in either RGB or YUV formats, it was not obvious, simply because one image was considered to be a 2D image and another was considered a 3D image, that separate pixel formats of RGB and YUV would be used to display one over the other. If Examiner disagrees with Applicants' characterization, Applicants respectfully request a showing why one of ordinary skill in the art would require a 2D image to have an RGB color base and why a 3D image would require a YUV color base.

Applicants note that court decisions have held that the teaching or suggestion to make the combination and the reasonable expectation of success must be both found in the prior art, and not based on applicant's disclosure. *In re. Vaeck*, 947 F.2d 488 (Fed. Cir. 1991). Further, the level of skill in the art cannot be relied upon to provide the suggestion to combine references. *Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308 (Fed. Cir. 1999). Applicants submit that the Office Action is improperly relying on the teachings of Applicants' disclosure for

suggesting that it would be obvious to modify the prior art to achieve the results of Applicants' claimed subject matter.

Applicants submit that because claim 10 (dependent claim) depends from claim 9 (parent claim), and as a dependent claim therefrom, the dependent claim is allowable for at least the reasons for which the parent claim is allowable. Applicants further submit that the dependent claim is also allowable in light of the presence of novel and non-obvious elements contained therein that are not otherwise present in the parent claim.

Dependent Claim 11

Applicants acknowledge the Office Action's statement that Blinn does not disclose an RGB to YUV converter.

Applicants direct the Examiner's attention to the arguments made above regarding claim 1, specifically the argument directed to the fact that Blinn is absent any disclosure of multiple graphic pipelines. In addition, Applicants direct the Examiner's attention to Snyder et al.'s Fig. 4A and note the similarities to Blinn's Fig. 8, and that both figures show a single graphics pipeline rather than a plurality of graphics pipelines. Further, Fig. 6 of Snyder et al. shows a flow chart where loop 292 shows the serial processing of each sprite, one after the other as performed in the block diagram layout of the corresponding Fig. 4A. As such, Applicants submit that both Blinn and Snyder et al. disclose systems that utilize a single pipeline to render multiple sprite layers, and as such, do not disclose the use of multiple graphics pipelines for the same.

Applicants further note that the RGB to YUV, (Col. 44, Lines 60-61), and the YUV to RGB, (Col. 45, Lines 16-44), conversions noted by the Office Action are for compression purposes (Col. 43, lns 66-67; Col. 44, lns 29-31; Col. 44, Lines 56-59; Col. 45, Lines 20-23), rather than because of images that have originated from different pixel formats and are being transformed to a like pixel format for continued processing (See Applicants' Fig. 5).

Further, Applicants next direct the Examiner's attention to the arguments above in Claim 10 indicating that Blinn is directed to processing RGB information, not YUV information. Applicants further note that the Office Action does not suggest that Snyder et al. discloses, teaches or suggests "... a YUV blending module operably coupled to produce the output image having the YUV color base from the corresponding image layers having the YUV color base," (claim 11).

Applicants note that court decisions have held that in order for prior art references to be combined by obviousness, at a minimum, there must be a suggestion of desirability for the modification. *In re Fritch*, 922 F.2d 1260, 23 USPQ 2d 1780 (Fed. Cir. 1992). The CAFC has held that the motivating suggestion must be explicit. *Winner International Royalty Corp. v. Wang*, 48 USPQ 2d 1139 (D.C. Dist.Ct. 1998), *aff'd*, 98-1553 slip op. (Fed. Cir. 2000). In addition, the CAFC has held that the teaching or suggestion to make the combination and the reasonable expectation of success must be both found in the prior art, and not based on applicant's disclosure. *In re. Vaeck*, 947 F.2d 488 (Fed. Cir. 1991). Further, the level of skill in the art cannot be relied upon to provide the suggestion to combine references. *Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308 (Fed. Cir. 1999).

Applicants submit that that the prior art does not include any suggestion of desirability for the combining of the two references. Applicants further submit that any such desirability of such a modification has been gleaned from Applicants disclosure. The Office Action's statement that one of ordinary skill in the art would find it obvious to combine the references to achieve Applicants claimed subject matter, without a specific showing of why this is true, is insufficient evidence for the showing of obviousness. Additionally, since none of the cited references teach or suggest a YUV blending module operably coupled to produce the output image having the

YUV color base from the corresponding image layers having the YUV color base, the combination of any of the cited references cannot produce the Applicants' invention as claimed.

Applicants submit that because claim 11 (dependent claim) depends from claim 9 (parent claim), and as a dependent claim therefrom, the dependent claim is allowable for at least the reasons for which the parent claim is allowable. Applicants further submit that the dependent claim is also allowable in light of the presence of novel and non-obvious elements contained therein that are not otherwise present in the parent claim.

Dependent Claim 15

Applicants acknowledge the Office Action's statement that Blinn does not disclose the AND/XOR blending.

Applicants also submit that because claim 15 (dependent claim) depends from claim 13 (parent claim), and as a dependent claim therefrom, the dependent claim is allowable for at least the reasons for which the parent claim is allowable. Applicants further submit that the dependent claim is also allowable in light of the presence of novel and non-obvious elements contained therein that are not otherwise present in the parent claim.

Dependent Claim 16

Applicants direct the Examiner's attention to the arguments above regarding claim 12 and specifically direct the Examiner to the language which states that Blinn does not disclose that a sprite layer contains any type cursor image, and thus there is no sprite layer to blend. Applicants also note that the Office Action does not suggest, nor have Applicants been able to identify, anywhere in Snyder et al. where there is disclosed any subsequent blending of a cursor image layer with an intermediate blended image. As such, since none of the cited references teach or suggest where a blending circuit blends a plurality of images layers to produce an intermediate blending image, and subsequently blending the cursor image layer with the

intermediate blended image in a predetermined blending order, the combination of any of the cited references cannot produce the Applicants' invention as claimed.

Dependent Claim 20

Applicant acknowledges the Office Action's statement that Blinn does not disclose a first input of receiving the at least one image layer and a second input for receiving the cursor image layer.

Applicants submit that just because Snyder et al. discloses a cursor positioning device such as a mouse or joystick, that this does not mean that Snyder et al. discloses, teaches or suggests, whether considered alone or in combination with Blinn, Applicants' claimed subject matter, including "a first input for receiving the at least one image layer, a second input for receiving the cursor image layer, and blending module operable to alpha blend the at least one image layer and the cursor image layer to produce the output image. In support of this position Applicants direct the Examiner's attention to the arguments made above regarding claim 16 addressing the fact that neither Blinn nor Snyder et al., disclose, teach or suggest a cursor image layer, let alone a blending module operable to alpha blend the at least one image layer and the cursor image layer to produce the output image, or for a second input for receiving the cursor image layer.

Applicants direct the Examiner's attention to the arguments pertaining to Claim 9 and further submit that that the prior art does not include any suggestion of desirability for the combining of the two references. In addition, Applicants submit that any such desirability of such a modification has been gleaned from Applicants disclosure. The Office Action's statement that one of ordinary skill in the art would find it obvious to combine the references to achieve Applicants claimed subject matter, without a specific showing of why this is true, is insufficient evidence for the showing of obviousness. Applicants further submit that since none of the cited

references teach or suggest a cursor image layer, a second input for receiving the cursor image layer, or blending module operable to alpha blend the at least one image layer and the cursor image layer to produce the output image, the combination of any of the cited references cannot produce the Applicants' invention as claimed.

In addition, Applicants submit that because claim 20 (dependent claim) depends from claim 12 (parent claim), and as a dependent claim therefrom, the dependent claim is allowable for at least the reasons for which the parent claim is allowable. Applicants further submit that the dependent claim is also allowable in light of the presence of novel and non-obvious elements contained therein that are not otherwise present in the parent claim.

Dependent Claim 21

Applicants direct the Examiner's attention to the arguments pertaining to Claims 9-11 and further submit that because claim 21 (dependent claim) depends from claim 12 (parent claim), and as a dependent claim therefrom, the dependent claim is allowable for at least the reasons for which the parent claim is allowable. Applicants further submit that the dependent claim is also allowable in light of the presence of novel and non-obvious elements contained therein that are not otherwise present in the parent claim.

Dependent Claim 22

Applicant directs the Examiner's attention to the arguments made above regarding claim 12, and more specifically, to the arguments therein directed to the lack of any disclosure in Blinn of any sprite, or any pipeline for processing such a sprite, containing or dedicated to the processing of a cursor. In addition, Applicants direct the Examiner's attention to the arguments above regarding claim 10 addressing why it is not obvious, simply because one image was considered to be a 2D image and another was considered a 3D image, that separate pixel formats of RGB and YUV are used to display one image over the other.

Further, Applicant submits that because claim 22 (dependent claim) indirectly depends from base claim 12 (base claim), and as a dependent claim therefrom, the dependent claim is allowable for at least the reasons for which the base claim is allowable. Applicants further submit that the dependent claim is also allowable in light of the presence of novel and non-obvious elements contained therein that are not otherwise present in the base claim and in intervening claim 21.

Dependent Claim 23

Applicants acknowledge the Office Action's statement that Blinn does not disclose an RGB to YUV conversion module operably coupled to convert the at least one image layer and the cursor image to each have the YUV color base.

Further, Applicants direct the Examiner's attention to the arguments above regarding claim 11 and submit that for the same, or similar reasons, that claim 23 is allowable as written. In addition, Applicant submits that because claim 23 (dependent claim) indirectly depends from base claim 12 (base claim), and as a dependent claim therefrom, the dependent claim is allowable for at least the reasons for which the base claim is allowable. Applicants further submit that the dependent claim is also allowable in light of the presence of novel and non-obvious elements contained therein that are not otherwise present in the base claim and in intervening claim 21

Independent Claim 33

Applicants acknowledge the Office Action's notice that Blinn does not explicitly specify the claim limitations in Claim 33. Furthermore, Applicants respectfully note that the Office Action citation to Synder's Figure 5B is improper. The process begins with step 254 in which a determination is made as to whether an additional polygon in the current chunk needs to be tiled. If no additional polygon needs to be tiled, the process continues with steps 258 through 262 in

which pixels are resolved, compressed into a chunk, and then finally stored. However, if an additional polygon must be tiled, the process continues to step 256 in which pixel value such as color and alpha for pixel locations covered or partially covered by one or more polygons is determined. (Column 15, Lines 40-67). Applicants respectfully state that the Examiner's citation to the general definition of tiling as "the process of determining pixel values such as color and *alpha* for pixel locations" is not specific enough to anticipate the limitations of Applicants' Claim 24. (Emphasis added). Specifically, the Applicants require "an apparatus for determining an alpha calculation mode ... comprising a processing module ... and memory ... wherein the memory stores instructions to (a) determine an alpha blending mode, wherein each of the plurality of modes corresponds to at least one of utilizing a per pixel alpha blending value, utilizing a global alpha blending value, and utilizing a key alpha blending value; (b) obtain blending information based on the alpha blending mode; (c) generate a corresponding blending value based on the blending information; and (d) provide the corresponding blending value to a blending module. Because Applicants note that the act of determining alpha values for pixel locations need not correspond to Applicants' Claim 1 (i.e., alpha may be supplied by some other process), Applicants respectfully request a showing within Blinn and Snyder in which the specific aforementioned limitations are disclosed, taught or suggested. As such, Applicants' respectfully believe that Claim 24 is in proper condition for allowance and was not inherently taught by Blinn and Snyder.

Dependent Claims 25-27

Applicants also submit that because Claims 25-27 (dependent claims) depend from Claim 33 (parent claim), the dependent claim is allowable for at least the reasons for which the parent claim is allowable. Applicants further submit that dependent claims are also allowable in light of

the presence of novel and non-obvious element contained therein that are not otherwise present in the parent claim.

Independent Claim 28

Applicants respectfully repeat the relevant remarks made with respect to Claim 24. Specifically, Applicants note that the Office Action's rejection to Claim 28 relies upon Snyder's definition of tiling as noted in Column 15, Lines 40-45. Specifically, "tiling refers to the process of determining pixel values, such as color and alpha for pixel locations covered or partially covered by one or more polygons." The Examiner's citation to this definition of tiling appears to be insufficient to render the claim limitations of Claim 28 obvious. The Applicants respectfully request a showing in which a video graphic data blending circuit comprises a first input and second input for receiving a first and second image layer, a blending module ... and an alpha value calculation module ... wherein ... alpha values are generated by the alpha value calculation module. Applicants submit that the process of tiling merely refers to determining color and alpha values for individual pixel locations and is silent as to blending and determining alpha values via/within an alpha value calculation module based upon at least one of a global alpha values, a per pixel value associated with at least one of the first and second image layers, and a non-alpha blend mode. Additionally, the Office Action relies upon the teaching of color space conversion techniques from RGB to YUV color-based coordinates. Snyder teaches that this conversion improves the degree of compression because the color coordinates require less bits for compression. However, this reference and rejection is improper because Claim 20 is not directed at a color space conversion from RGB to YUV, but rather to a blending circuit. Because of the foregoing, Applicants respectfully believe that Claim 28 is in proper condition for allowance.

Dependent Claims 29-32

Applicants submit that because Claims 29-32 (dependent claims) depend from Claim 28 (parent claim), the dependent claims are allowable for at least the reasons for which the parent claim is allowable. Applicants further submit that the dependent claims are also allowable in light of the presence of novel and non-obvious elements contained therein that are not otherwise present in the parent claim.

§ 112 Rejections

Claims 1-32 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. With respect to Claims 3, 7, 18, 25 and 28, the Examiner rejected the limitations “global” as it allegedly lacks sufficient antecedent basis. Applicants respectfully note that this rejection is improper and request its withdraw. For example and with respect to Claim 3, the Applicants respectfully note that the phrase “a global alpha value” has proper antecedent basis and is in proper condition for allowance.

With respect to Claims 7 and 18, the Office Action claimed that the phrase “one of the at least two of the corresponding image layers” lack sufficient antecedent basis. Applicants respectfully note that this rejection is also improper and should be withdrawn. For example, proper antecedent basis for the phrase “at least two of the corresponding image layers” as recited in Claim 7 can be found within Claim 6. Specifically, Claim 6 recites that “the first mixing module blends ‘at least two of the corresponding image layers’ to produce an intermediate blended image.” As such, the first limitation within Claim 7, wherein the first mixing module comprises a first input for receiving one of “the at least two of the corresponding image layers” has proper antecedent basis and is in proper condition for allowance.

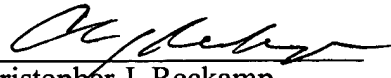
Responding to Paragraph 34, Applicants respectfully note that there is proper antecedent basis for the phrase "a blending module" and the phrase "a specified alpha value." (Claim 7, Lines 15-16). Furthermore, Applicants respectfully note that Figure 1 is in reference to a graphical representation of the functionality of the blending module. In contrast to the Office Action's assertion, the Specification explains that the process of Figure 1 allows, but is not illustrative of alpha blending. (Page 5, Lines 8-23). As a result, the Office Action's rejection to Figure 1 and Claim 7 is improper. Applicants respectfully request withdrawal of this rejection for the aforementioned reasons.

As to the remainder of the claims and their associated rejections laid out within the Office Action in paragraphs 34-62, Applicants respectfully note that said rejections are improper and should be withdrawn. Proper antecedent basis can in fact be found for each of the claims.

CONCLUSION

For the foregoing reasons, withdrawal of the rejections and allowance of the claims is respectfully requested. If there are any questions or comments regarding this response, the Examiner is encouraged to contact the undersigned at 312-609-7500.

Respectfully submitted,

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